

WHAT IS CLAIMED IS:

1. A system for location search of a data processing device including a wireless communications unit and a unit to output received radio wave information for location detection, the system comprising:

5 a unit which acquires the received radio wave information from the data processing device by wireless communications;

10 a location detection unit which calculates position coordinate information to specify a location of the data processing device based on the received radio wave information;

15 a region information database in which region information is stored to designate a spatial range associated with the position coordinate information; and

20 a search unit which searches the region information corresponding to the position coordinate information calculated by the location detection unit from the region information database.

25 2. The system according to claim 1, wherein the region information database stores the region information including space identification information to specify the spatial range associated with the position coordinate information, and

the space identification information includes

a space name allocated to the spatial range, and range identification information which identifies the spatial range set for each position coordinate information and which indicates the same content at a time when  
5 a plurality of spatial ranges specified by different position coordinate information are handled as the same spatial range.

10 3. The system according to claim 1, wherein the region information database stores space identification information which specifies the spatial range associated with the position coordinate information, and the region information including control information indicating a predetermined control process for each spatial range.

15 4. The system according to claim 1, wherein the region information database stores the region information including space identification information associated with the position coordinate information to identify the spatial range designated by a plane coordinate of two points in a three-dimensional space and a region in a vertical direction.  
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5. The system according to claim 1, further comprising;

25 a computer system which manages the location of the data processing device; and  
means for transferring the position coordinate information calculated by the location detection unit

and region information searched by the search unit to the computer system.

6. The system according to claim 1, further comprising:

5 a computer system which manages a location of the data processing device; and  
means for transferring the position coordinate information and the region information to the computer system,

10 the computer system including:

a unit which uses the position coordinate information and the region information to produce display information capable of confirming the location of the data processing device; and

15 a display device which displays the display information on a display.

7. The system according to claim 6, wherein the computer system includes a unit which produces map information to display a map including the location of the data processing device on the display, when the display device displays the display information on the display.

25 8. The system according to claim 1, wherein the region information database stores space identification information specifying the spatial range associated with the position coordinate information and the region information including control information indicating

a predetermined process for each spatial range,

the system further comprising:

a computer system which manages the location of the data processing device; and

5 means for transferring the position coordinate information and the region information to the computer system,

the computer system including:

10 a unit which uses the position coordinate information and the region information to produce display information capable of confirming the location of the data processing device;

a display device which displays the display information on a display; and

15 a controller which executes a predetermined process set for each spatial range corresponding to the location of the data processing device in accordance with the control information.

9. The system according to claim 8, wherein the controller executes a control so as to prohibit the display information from being displayed or to change the display information to a predetermined content, when the control information indicates the display prohibition or the change of the display information.

20 10. The system according to claim 1, further comprising:

a controller which executes a predetermined alarm

process, when control information indicates an alarm.

11. The system according to claim 1, wherein the region information database stores the region information including space identification information specifying the spatial range associated with the position coordinate information,

the space identification information includes:

a space name allocated to the spatial range; range identification information which identifies the spatial range set for each position coordinate information and which indicates the same content, when a plurality of spatial ranges specified by different position coordinate information are treated as the same spatial range; and entrance/exit information indicating a position coordinate of an entrance/exit with respect to the spatial range.

12. The system according to claim 1, wherein the region information database stores space identification information specifying the spatial range associated with the position coordinate information, and the region information including entrance/exit information indicating a position coordinate of an entrance/exit with respect to the spatial range, and

25 the search unit includes movement detection means for detecting that the data processing device has moved in different spatial ranges based on the position

coordinate information calculated by the location detection unit, and

ignores the movement by the movement detection means as an error, when searching the region information from the region information database based on the position coordinate information calculated by the location detection unit, and judging that the data processing device has moved in the different spatial ranges through the range other than the entrance/exit indicated by the entrance/exit information.

13. The system according to claim 1, further comprising:

a schedule information management unit which stores schedule information including a use time corresponding to the spatial range, wherein the search unit judges whether or not the position coordinate information is an error based on the schedule information, and corrects the position coordinate information in a case in which the judgment result is the error, when searching the region information from the region information database based on the position coordinate information calculated by the location detection unit.

14. A method of location search of a data processing device including a wireless communications unit and a unit to output received radio wave information for location detection, the method

comprising:

calculating position coordinate information to specify a location of the data processing device based on the received radio wave information acquired from the data processing device by wireless communications; and

referring to a region information database in which region information is stored to designate a spatial range associated with the position coordinate information, and searching the region information corresponding to the position coordinate information from the region information database.

15. A method according to claim 14, further comprising:

transferring the position coordinate information and the region information to a computer system which manages the location of the data processing device.

16. A method according to claim 15, wherein the region information database stores space identification information to specify the spatial range associated with the position coordinate information, and the region information including control information indicating a predetermined control process for each spatial range, and

25 the computer system uses the position coordinate information and the region information to display information capable of confirming the location of

the data processing device on a display, and  
executes a predetermined process set for each  
spatial range corresponding to the location of the data  
processing device in accordance with the control  
5 information.

17. A method according to claim 14, wherein the  
region information database stores space identification  
information to specify the spatial range associated  
with the position coordinate information, and the  
10 region information including entrance/exit information  
indicating a position coordinate of an entrance/exit  
with respect to the spatial range,

the method further comprising:  
detecting that the data processing device has  
15 moved in different spatial ranges based on the position  
coordinate information; and

ignoring the movement as an error, when searching  
the region information from the region information  
database based on the position coordinate information  
20 and judging that the data processing device has moved  
in the different spatial ranges through a range other  
than the entrance/exit indicated by the entrance/exit  
information.

18. A method according to claim 14, further  
25 comprising:

disposing a schedule information management unit  
storing schedule information including a use time

corresponding to the spatial range to judge whether or  
not the position coordinate information is an error  
based on the schedule information; and

correcting the position coordinate information  
5 based on the schedule information in a case in which  
the judgment result is the error.